

REMARKS

This paper represents a full and timely response to the non-final Office Action dated November 3, 2003 (Paper No. 22). This amendment amends claims 1 and 4 to further clarify a portion of the scope of the invention sought to be patented, and further requests the reconsideration of certain findings of facts in connection with the rejection of the claims. Support for this amendment can be found variously throughout the specification, including, for example, page 23, lines 8-25 and Figure 3. No new matter has been added. Reexamination and reconsideration in light of the present amendment and the following remarks are respectfully requested.

Allowable Subject Matter

The Applicant acknowledges and thanks the Examiner for the allowance of claims 54 to 56 and for the recognition of claims 6 to 8 as having allowable subject matter.

Claim Rejections- 35 U.S.C. § 102

In the Action, claims 1, 2, 4, 9-12, 53, 57-61 and 64 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 5,999,444 to Fujiwara et al. ("Fujiwara '444"). This rejection is respectfully traversed in light of the present amendment.

Independent claim 1 of the present invention recites a nonvolatile semiconductor memory device wherein, *inter alia*, a FN type tunneling film made entirely of material having a dielectric constant greater than that of silicon oxide is formed so as to be in direct contact with a channel forming region.

In contrast, the invention disclosed in Fujiwara '444 fails to disclose, teach or suggest a FN type tunneling film made entirely of material having a dielectric constant greater than

that of silicon oxide and formed so as to be in direct contact with a channel forming region. As disclosed in column 11, lines 34-36 of Fujiwara '444, the only film to come in direct contact with the channel forming region 1a is tunnel insulating film 10, which film is made of silicon oxide and formed by thermal oxidation. (col. 11, lines 34-36). Although the thin layer 10a disclosed in Fujiwara is formed of oxynitride, this thin layer 10a does not directly contact the channel forming region 1a, and therefore fails to meet the full limitations of claim 1. Accordingly, because Fujiwara fails to disclose, teach or suggest each and every limitation of claim 1, a *prima facie* rejection has not been established, and withdrawal of this rejection is respectfully requested.

Moreover, aside from the novel limitations recited therein, claims 2, 4, 9-12, 53, 57-61 and 64, being dependent either directly or indirectly upon base claim 1, are also allowable for at least the reasons set forth above. Withdrawal of the rejection of these claims is therefore courteously solicited.

Claims 1, 2, 4 and 53 were also rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,518,617 to Nakamura et al. ("Nakamura"). This rejection is respectfully traversed.

Independent claim 1 of the present invention recites a nonvolatile semiconductor memory device wherein, *inter alia*, a gate insulating film formed adjacent to a semiconductor channel forming region comprises a Fowler-Nordheim (FN) type tunneling film which has a FN type tunneling electroconductivity.

In contrast, the Nakamura reference fails to disclose, teach or suggest a FN type tunneling film having a FN type tunneling electroconductivity. Although Nakamura does arguably teach of a tunnel film 12 made of silicon oxide produced on the surface of the channel forming region 11a, Nakamura fails to

disclose, teach or suggest this tunnel film 12 as having an FN type electroconductivity. This FN electroconductivity characteristic is not inherent, as is explained on page 24, lines 4-25, and imparts distinctive electroconductivity characteristics to the film such as reduced carrier trap effects. In addition, although the examiner argues that the term "FN type tunneling film" is a method recitation in a device claimed, the Applicant submits that the limitation of claim 1 wherein the FN type tunneling film is recited as having "a FN type tunneling electroconductivity" does impart distinctive characteristics to the product per se, as explained above, and is not a method recitation in a product claim.

Accordingly, since Nakamura fails to disclose, teach or suggest each and every limitation of claim 1, a *prima facie* rejection has not been established, and withdrawal of this rejection is respectfully requested.

Moreover, aside from the novel limitations recited therein, claims 2, 4 and 53, being directly dependent upon base claim 1, are also allowable for at least the reasons set forth above. Withdrawal of the rejection of these claims is therefore courteously solicited.

Conclusion:

For at least the foregoing reasons, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the examiner is respectfully requested to pass this application to issue. If the examiner has any comments or suggestions that could place this application in even better form, the examiner is invited to telephone the undersigned attorney at the below-listed number.

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Respectfully submitted,

By \_\_\_\_\_

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